

**REMARKS**

Claims 1-15 are pending in the present application.

Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the Office Action of March 10, 2006 the following actions were taken:

(1) Claim 1-5 and 12-15 were provisionally rejected on the grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1-3, 10, and 17-18 of U.S. Patent No. 6,932,466 (hereinafter "Payne '466") in view of European Patent Application No. 0485079A1 (hereinafter "Henry"); and

(2) Claims 1-15 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over International PCT Publication No. WO 02/45971A1 (hereinafter "Payne '971") in view of Henry.

It is respectfully submitted that the presently pending claims be allowed based on the remarks below.

**Double Patenting**

The Examiner has provisionally rejected claims 1-5 and 12-15 under the judicially created doctrine of double patenting over claims 1-3, 10, and 17-18 of Payne '466 in view of Henry. As the double patenting rejection is based on the same Payne '971 and Henry teachings as the 103 rejection, the Applicant has responded with the appropriate arguments in the following 103 section of this response, please see below. In light of those arguments, the Applicant submits that such a combination of references is improper and therefore, the Applicant respectfully requests that this rejection be withdrawn.

It is worthy to note that even though the Examiner has used two different Payne references (the PCT and the U.S. patent), both were cited by the Examiner as failing to teach the same element, i.e. a required chlorine concentration of less than 400 ppm. Specifically, the Examiner stated that the "US Patent fail[s] to teaches that the fixing composition has a chloride concentration less than 400ppm by weight," (U.S. Patent) and that "Payne et al. fail[s] to teaches that the fixing composition has a chloride concentration less than 400ppm by weight" (PCT). Therefore, the Applicant submits that the arguments made below are valid against both references.

Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1-15 U.S.C. § 103(a) as being unpatentable over several references.

The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness. In order to maintain a *prima facie* case of obviousness by combining references, the prior art must provide some reason or motivation to make the claimed compositions. *In re Dillon*, 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990). As aptly stated in *In re Jones*, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992):

"Before the PTO may combine the disclosure of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art... Conspicuously missing from this record is any *evidence*, other than the PTO's speculation (if it be called evidence) that one of ordinary skill in the...art would have been motivated to make the modifications of the prior art necessary to arrive at the claimed (invention)."

It has been widely recognized that virtually every invention is a combination of elements and that most, if not all, of these will be found somewhere in an examination of the prior art. This reasoning lead the court, in *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 199 (Fed. Cir. 1983) to state:

"...it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entirety, would have been obvious to one of ordinary skill in the art at the time the invention was made." (underlining added)

*In re Sernaker*, 217 U.S.P.Q. 1, 5-6, (Fed. Cir. 1983) states a test to determine whether a rejection of an invention based on a combination of prior art elements is appropriate as follows:

"The lesson of this case appears to be that prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their

teachings...The board never showed how the teaching of the prior art could be combined to make the invention." (underlining added)

With the above background in mind, the Applicant contends that a *prima facie* case of obviousness with respect to pending claims has not been met. Specifically, the references do not provide sufficient teachings or motivation to be modified or combined in order to arrive at Applicant's invention. Further, Applicant contends that the combination of references is based on hindsight. Therefore, without knowledge of the disclosure of the present invention, one of ordinary skill in the art would not be able to make the combinations proposed to arrive at the claimed invention.

The Examiner has rejected claims 1-15 as being obvious over either of two Payne references in view of Henry. Thus, a brief discussion of these two references is believed to be in order.

*Payne and Payne '466 (collective Payne)*

Payne discloses an ink-jet printing process comprising the steps of applying ink to a substrate and applying a fixing composition that contains a poly(C<sub>3-18</sub>-hydrocarbyl monoguanide). As noted by the Examiner, Payne teaches (1) the fixing composition is applied in a localized manner; (2) the areas of ink and composition are substantially coextensive; (3) the polymonoguanide contains a plurality of groups represented by Formula 1 and/or 2; (4) the composition contains various percentages of polymer containing monoguanide, binder, water-soluble organic solvent, and water; (5) a substrate printed with an image, (6) a set of liquids suitable for use in an ink jet printer; and (7) an ink jet printer cartridge.

However, there are several deficiencies not taught by Payne. First, the Examiner acknowledges that Payne does not teach that the fixing composition has a chloride concentration less than 400 ppm by weight. Second, Payne does not teach melt polymerization with a guanidine salt other than hydrochloride. Even though the Examiner has referred to page 4, lines 8-15, and the examples, a close inspection of Payne reveals that a hydrochloride salt is present. Specifically, page 4, lines 8-15 states that "PMGs may be prepared by the reaction of guanidine hydrochloride with a diamine . . ." (underline added). Also, the examples on page 14, line 30; and page 15, lines 4-12; clearly show that guanidine hydrochloride was used in all of the melt polymerization reactions schemes. Third, Payne

does not teach the process of preparing a polymonoguanide from solvent polymerization of a C<sub>3-18</sub>-hydrocarbyl diamine with a guanidine salt other than guanidine hydrochloride. Even though the Examiner has referred to page 4, lines 8-15, and the examples, again, a close inspection of Payne reveals that a hydrochloride salt is present. Specifically, page 4, lines 8-15 states that “PMGs may be prepared by the reaction of guanidine hydrochloride with a diamine . . .” (underline added). Also, the examples on page 15, lines 14-27; clearly show that guanidine hydrochloride was used in all of the solvent polymerization reactions schemes.

#### *Henry*

Henry discloses the use of biguanides in various amounts as an anti-microbial agent. The Examiner alleges that Henry teaches that the biguanide compound is a fixing composition and prevents microorganism growth. However, Henry never mentions the use of biguanide as a fixing composition. In fact, Henry only teaches that biguanide can be used in an aqueous medium to prevent micro-organism growth and gives examples such as cooling water liquors, paper mill liquors, and metal working fluids. Clearly, Henry does not teach biguanide as a fixing composition. Further, the section cited by the Examiner would only add to the amount of chloride present inherently in Payne, thus teaching away from keeping the chloride concentration low.

#### *Claims 1-15*

The Examiner has rejected claims 1-15 over Payne in view of Henry. In order to establish a proper combination of references there must be some suggestion or motivation for doing so, as previously explained in the above case law. In this case, the Examiner is attempting to combine two unrelated references. In order to cure the deficiency of Payne, the Examiner has referenced Henry. But where is the motivation to combine Payne with Henry? The Examiner has stated that Payne’s deficiency as lacking the element that requires that the fixing composition have a chloride concentration of less than 400 ppm. In order to cure the deficiency, the Examiner has combined Payne with Henry. However, Henry does not teach a fixing composition. Henry teaches an anti-microbial additive. The only way to properly cure Payne’s deficiency would be to combine Payne with a reference that teaches a fixing composition that has a chloride concentration of less than 400 ppm. The Examiner has not done so in this case. Therefore, the Applicant submits that the combination of Payne with Henry is improper and could only be made by impermissible hindsight.

Even if such a combination were proper, there is no likelihood of success of providing the present invention upon combining these two references. The present application clearly sets forth that one object of the invention is to minimize the amount of chlorine in the fixing composition to less than 400 ppm. A combination of Henry and Payne would provide a composition that contains a fixing composition that contains chloride (Payne) and an anti-microbial additive that also contains chloride (Henry). Thus, the combination would contain two sources of chloride. Overall, the combination of these two references would increase the amount of chlorine present in the ink-jet printing process.

Even if Henry taught that the anti-microbial additive was also a fixing composition, so that the substitution of Henry's additive for Payne's fixing composition was proper, such a combination would still not provide the present invention. Henry provides similar biguanide structures as found in Payne. See page 5, structure 3, lines 12-15. The difference that the Examiner seems to be relying on is that Henry provides biguanide in amounts of "less than 1000 ppm, especially less than 250 ppm by weight" achieved by using a biguanide concentration as low as 0.0001%. See page 5, lines 16-17, 42-45. However, Henry is disclosing this amount for use as an anti-microbial agent, not a fixing agent. The present application clearly requires that the fixing agent has a minimum concentration of 1 part per 1000 (same as 0.1 wt% in amended claim), not 1 part per million as disclosed by Henry. See present application page 11, lines 1-9; claim 12; see also Office Action page 7; see also Henry, page 5, lines 16-17, 42-45 (1 part per million equal to 0.0001% concentration). At this minimum concentration, Henry could not provide the chloride concentration of less than 400 ppm as required by the present invention, because this amount is three orders of magnitude less than that required by the present claims. Based on these results, a combination of Payne and Henry would have no likelihood of success in achieving the present invention making such a combination improper.

Therefore, in light of the above arguments, the Applicant submits that claims 1-15 are novel and respectfully requests that the Examiner withdraw the 103 rejection. Additionally, since neither the Payne U.S. patent nor the Payne PCT differs with respect to the required fixing chloride concentration requirement, the Applicant respectfully requests that the Examiner withdraw the double patenting rejection as well.

**CONCLUSION**

Because the combination of references does not teach the processes or composition of the present invention, the Applicant respectfully asserts the Examiner has not satisfied the requirement for establishing a case of *prima facie* obviousness. Additionally, because there is not adequate motivation or suggestion to modify or combine the references, the Applicant respectfully asserts any such combination would be improper. Therefore, the pending claim set should be allowable for these additional reasons. Reconsideration is respectfully requested.

In view of the foregoing, Applicants submit that claims 1-15 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone W. Bradley Haymond (Registration No. 35,186) at (541) 715-0159 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 10<sup>th</sup> day of August, 2006.

Respectfully submitted,



Gary P. Oakeson  
Attorney for Applicant  
Registration No. 44,266

THORPE NORTH & WESTERN, LLP  
8180 South 700 East, Suite 200  
Sandy, Utah 84070  
(801) 566-6633

On Behalf Of:  
HEWLETT-PACKARD COMPANY  
1000 NE Circle Blvd., m/s 422B  
Corvallis, OR 97330-4239  
(541) 715-0159